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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,274

07/13/2006

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4786-3

5682

23117 7590 09/23/2011
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EXAMINER

GOODCHILD, WILLIAM J

ART UNIT

PAPER NUMBER

2433

MAIL DATE

DELIVERY MODE

09/23/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,274	Applicant(s) GROUZDEV ET AL.	
	Examiner WILLIAM GOODCHILD	Art Unit 2433	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1,6,7,12,13,17-19,21 and 23 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1,6,7,12,13,17-19,21 and 23 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☒ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/23/2010, 12/29/2010</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/23/2010 has been entered.

Specification

2. The disclosure is objected to because of the following informalities: Specification, page 8, seems to be referring to figure 1, but does not identify figure 1.
3. Specification, page 9, line 13, refers to figure 3, but, seems to be relating to figure 2.

Appropriate correction is required.

Claim Objections

4. Claims 6-7, 12-13 and 19 objected to because of the following informalities: claims 6-7, 12-13 and 19 each are dependent on claims that do not precede the

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dependent claims, See MPEP, Rules, paragraph 608.01(n) B 2. Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 19 is rejected under 35 U.S.C. 101 because the claimed invention is directed to nonstatutory subject matter.

The claim is drawn to a “computer readable tangible storage media”. The specification is silent regarding the meaning of this term. Thus, applying the broadest reasonable interpretation in light of the specification and taking into account the meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art (MPEP 2111), the claim as a whole covers both transitory and non-transitory media. A transitory medium does not fall into any of the 4 categories of invention (process, machine, manufacture, or composition of matter).

The claim may be amended by changing “computer readable tangible storage media” to –non-transitory computer readable tangible storage media–, thus excluding that portion of the scope covering transitory signals. The scope of the disclosure given that state-of-the-art covers both transitory and non-transitory media, and this amendment would limit the claim to an eligible (non-transitory) embodiment.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 6-7, 12-13, 17-19, 21 and 23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 6-7, 12, 18-19, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yodaiken, (US Patent No. 6,782,424), and further in view of Kuver et al., (US Patent No. 6,438,604), (hereinafter Kuver).

Regarding claim 1, Yodaiken discloses a processor [Yodaiken, figures 1-2];
a first operating system running on the processor, said first operating system being a real time operating system [Yodaiken, figures 1-2 and column 4, lines 36-37];
a second operating system running on the processor, said second operating system being a general purpose operating system [Yodaiken, figures 1-2 and column 5, line 65]; and
a network interface for communicating data [Yodaiken, figures 1-2, network device];

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wherein the first and second operating systems are arranged to share usage of the network interface [Yodaiken, figures 1-2, column 6, lines 6-25, operating systems share network interface and logical connections]

the system further comprising executable code for providing a real time data transmission channel for communicating data and associated control and / or supervisory signals [Yodaiken, column 4, lines 1-10], in which the code comprises:

first code operating under said first operating system for communicating said data [Yodaiken, column 4, lines 1-10]; and

second code operating under said second operating system for communicating said control and / or supervisory signals [Yodaiken, column 3, lines 56-65 and column 4, lines 1-10].

Yodaiken does not specifically disclose wherein the first operating system is arranged to use a UDP/IP protocol stack to communicate said data.

However, Kuver teaches a real time operating system using UDP for video data [Kuver, column 6, lines 54-67].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a real time operating system using UDP in order to provide a way of transferring multimedia type data.

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Regarding claim 18, Yodaiken-Kuver further discloses providing first and second operating systems on the computer, operating concurrently [Yodaiken, figures 1-2], wherein the first operating system is a real time operating system [Yodaiken, column 4, lines 36-37] and the second operating system is a general purpose operating system [Yodaiken, column 5, line 64], said operating systems sharing a logical network address and allowing said operating systems to share access to a network interface of said computer [Yodaiken, figures 1-2, supervisor OS and secondary OS sharing network interface]; and wherein the first operating system is arranged to use a UDP/IP protocol stack to communicate data [Kuver, column 6, lines 54-67].

Regarding claim 21, Yodaiken-Kuver further discloses a processor [Yodaiken, figures 1-2];

a first operating system running on the processor, said first operating system being a real time operating system [Yodaiken, figures 1-2 and column 4, lines 36-37];

a second operating system running on the processor, said second operating system being a general purpose operating system [Yodaiken, figures 1-2 and column 5, line 65];

a network interface for communicating data [Yodaiken, figures 1-2, network device];

wherein the first and second operating systems are arranged to share usage of the network interface [Yodaiken, figures 1-2 operating systems share network interface];

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the system further comprising code for providing a real time data transmission channel for communicating data and associated control and / or supervisor signals [Yodaiken, column 4, lines 1-10], in which the code comprises:

first code operating under said first operating system for communicating said data [Yodaiken, column 4, lines 1-10]; and

second code operating under said second operating system for communicating said control and / or supervisory signals [Yodaiken, column 3, lines 56-65 and column 4, lines 1-10];

wherein the first operating system is arranged to use a UDP/IP protocol stack to communicate said data [Kuver, column 6, lines 64-66].

Regarding claim 6, Yodaiken-Kuver further discloses the transmission scheduler is arranged to give priority to the first operating system [Yodaiken; column 4 lines 35-45; real time supervisory operating system given priority].

Regarding claim 7, Yodaiken-Kuver further discloses the transmission scheduler is arranged not to send any packets from the second operating system while there are packets for transmission from the first operating system [Yodaiken; Figure 3; critical packets are transmitted over non-critical packets].

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Regarding claim 12, Yodaiken-Kuver further discloses an inter operating system communications channel for carrying messages between said first and second operating systems, and/or applications running thereon [Yodaiken; Figures 1-2; NCS].

Regarding claim 23, Yodaiken-Kuver further discloses providing real time and general purpose operating systems on the computer [Yodaiken, figures 1-2, column 4, lines 36-37 and column 5, lines 65], operating concurrently, and sharing a network address while allowing said operating systems to share access to a network interface of said computer [Yodaiken, figures 1-2, operating systems share NIC];

the real time operating system comprising a first proxy driver program and a network interface driver program for communicating data from the real time operating system to the network interface [Yodaiken, figures 1-2, NCS and Device driver], said real time operating system being configured to use UDP/IP protocol stack to communicate said data [Kuver, column 6, lines 64-66];

the general purpose operating system, instead of a network interface driver program, comprising a second proxy driver program for communicating with the first proxy driver program [Yodaiken, figures 1-2, virtual device driver];

receiving all incoming network data packets at the network interface of the real time operating system which then selectively forwards to the general purpose operating system incoming data packets not specifically for use by the real time operating system [Yodaiken; Figures 1-2, column 6 lines 25-37, column 6 lines 60-67, column 7 lines 1-8, column 7 lines 62-67, column 8 lines 1-8; supervisory operating system receives all

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incoming data and forwards to secondary operating system data not specifically for use by supervisory operating system];

selectively enabling the real time operating system or the general purpose operating system to transmit outgoing data via the network interface of the real time operating system, thereby to allocate transmission capacity between the two operating systems [Yodaiken; Figures 1-2, column 6 lines 60-67, column 7 lines 1-8, column 8 lines 16-58; event handlers and queues for selectively enabling transmission of data by operating systems].

Regarding claim 19, Yodaiken-Kuver further discloses Computer readable tangible storage media storing executable code for causing a computer to perform the method or claim 18 or 23]

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yodaiken-Kuver, and further in view of Ratcliff et al., (US Patent No. 5,740,438), (hereinafter Ratcliff).

Regarding claim 13, Yodaiken-Kuver does not specifically disclose the first operating system has a first subset of address ports and the second operating system has a second subset o address ports, each said subset comprising at least one address port, said first and second subsets being mutually exclusive.

However, Ratcliff discloses in which the first operating system has a first subset of address ports and the second operating system has a second subset of address ports, each said subset comprising at least one address port, said first and second subsets being mutually exclusive [Ratcliff; column 1 lines 12-32, column 2 lines 23-67, column 3 lines 19-62, column 5 lines 53-67, column 6 lines 1-35, column 7 lines 5-65, operating system partitions using different ports].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify critical and non-critical ports for first and second operating systems, as disclosed by Yodaiken, to include that the first operating system has a first subset of address ports and the second operating system has a second subset of address ports, each said subset comprising at least one address port, said first and second subsets being mutually exclusive, as disclosed by Ratcliff, in order to independent allocation of ports to partitions.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yodaiken-Kuver, and further in view of Vij et al., (US Patent No. 6,452,910), (hereinafter Vij).

Regarding claim 17, Yodaiken-Kuver further discloses a computer concurrently running first and second operating system [Yodaiken, figures 1-2];

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the first operating system being a real time operating system and the second operating system being a general purpose operating system [Yodaiken, column 4, lines 36-37 and column 5, line 65];

the first operating system being arranged to communicate voice data [Kuver, column 8, lines 25-29] and the second operating system being arranged to communicate signaling and / or supervisory data [Yodaiken, column 3, lines 56-65 and column 4, lines 1-10], using respective second TCP/IP stack and first and second OS, sharing common IP address [Yodaiken, figure 1-2, sharing a NIC, sharing common IP]; and

wherein the first operating system is arranged to use a UDP/IP protocol stack to communicate said data [Kuver, column 6, lines 64-65].

Yodaiken-Kuver does not specifically disclose a first TCP stack.

However, Vij teaches a real time operating system using a TCP/IP stack [Vij, column 4, lines 36-37].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a real time operating system using TCP/IP in order to provide for guaranteed communication.

Conclusion

Examiner's Note: Examiner has cited particular paragraphs / columns and line numbers in the reference(s) applied to the claims above for the convenience of the applicant.

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Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the cited passages as taught by the prior art or relied upon by the examiner.

Should applicant amend the claims of the claimed invention, it is respectfully requested that applicant clearly indicate the portion(s) of applicant's specification that support the amended claim language for ascertaining the metes and bounds of applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM GOODCHILD whose telephone number is (571)270-1589. The examiner can normally be reached on Monday - Friday / 8:00 AM - 4:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William J. Goodchild/
Examiner
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